

We claim:

1. A method of inhibiting a condition or disease associated with A $\beta$  in a subject in need thereof, comprising administering to a target site of the brain of the subject an effective amount of an apoE2 lentiviral expression vector.
2. The method of Claim 1, wherein the subject is a human.
3. The method of Claim 2, wherein the subject is genetically homozygous for APOE4.
4. The method of Claim 2, wherein the subject is genetically heterozygous for APOE4.
5. The method of Claim 2, wherein the target site of the brain is selected from cortex, hippocampus, subiculum, dentate gyrus, amygdala, and cerebrospinal fluid.
6. The method of Claim 5, wherein the target site is hippocampus.
7. The method of Claim 1, wherein the apoE2 lentiviral expression vector is administered by direct intracerebral injection.
8. The method of Claim 7, wherein the apoE2 lentiviral expression vector is administered by direct stereotaxic intracerebral injection.
9. The method of Claim 1 wherein the apoE2 lentiviral expression vector is present in a pharmaceutical composition at a concentration from  $1\times 10^8$  to  $1\times 10^{10}$  transducing units/ml.
10. The method of Claim 9 wherein from 2  $\mu$ l to 10  $\mu$ l of the pharmaceutical composition is administered to the target site.

11. A method of reducing progression of a condition or disease associated with A $\beta$  in a subject in need thereof, comprising administering to a target site of the brain of the subject an effective amount of an apoE2 lentiviral expression vector.
12. The method of Claim 11, wherein the subject is a human.
13. The method of Claim 12, wherein the subject is genetically homozygous for APOE4.
14. The method of Claim 12, wherein the subject is genetically heterozygous for APOE4.
15. The method of Claim 12, wherein the target site of the brain is selected from cortex, hippocampus, subiculum, dentate gyrus, amygdala, and cerebrospinal fluid.
16. The method of Claim 15, wherein the target site is hippocampus.
17. The method of Claim 11, wherein the apoE2 lentiviral expression vector is administered by direct intracerebral injection.
18. The method of Claim 17, wherein the apoE2 lentiviral expression vector is administered by direct stereotaxic intracerebral injection.
19. The method of Claim 11 wherein the apoE2 lentiviral expression vector is present in a pharmaceutical composition at a concentration of at least  $1 \times 10^8$  transducing units/ml.
20. The method of Claim 11 wherein the apoE2 lentiviral expression vector is present in a pharmaceutical composition at a concentration from  $1 \times 10^8$  to  $1 \times 10^{10}$  transducing units/ml.
21. The method of Claims 19 or 20 wherein from 2  $\mu$ l to 10  $\mu$ l of the pharmaceutical composition is administered to the target site.

22. The method of any of Claims 1-21, wherein the condition or disease is selected from Alzheimer's disease, Down's syndrome, cerebral amyloid angiopathy, and mild cognitive impairment.
23. The method of Claim 22, wherein the condition or disease is Alzheimer's disease.
24. The method of Claim 22, wherein the condition or disease is Down's syndrome.
25. The method of Claim 22, wherein the condition or disease is cerebral amyloid angiopathy.
26. The method of Claim 22, wherein the condition or disease is mild cognitive impairment.
27. A method of preventing or reducing brain A $\beta$  burden in a subject in need thereof, comprising administering to a target site of the brain of the subject an effective amount of an apoE2 lentiviral expression vector.
28. The method of Claim 27, wherein the subject is a human.
29. The method of Claim 28, wherein the subject is genetically homozygous for APOE4.
30. The method of Claim 28, wherein the subject is genetically heterozygous for APOE4.
31. The method of Claim 28, wherein the target site of the brain is selected from cortex, hippocampus, subiculum, dentate gyrus, amygdala, and cerebrospinal fluid.
32. The method of Claim 31, wherein the target site is hippocampus.

33. The method of Claim 27, wherein the apoE2 lentiviral expression vector is administered by direct intracerebral injection.
34. The method of Claim 33, wherein the apoE2 lentiviral expression vector is administered by direct stereotaxic intracerebral injection.
35. The method of Claim 27 wherein the apoE2 lentiviral expression vector is present in a pharmaceutical composition at a concentration from  $1\times 10^8$  to  $1\times 10^{10}$  transducing units/ml.
36. The method of Claim 35 wherein from 2  $\mu$ l to 10  $\mu$ l of the pharmaceutical composition is administered to the target site.